

REMARKS**I. INTRODUCTION**

Claims 1-17 currently stand rejected. In light of the arguments to appear hereinafter, Applicants respectfully request reconsideration.

II. REJECTION OF CLAIMS 1-17 UNDER 35 U.S.C. § 103(a)

Claims 1-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hayashi et al. (U.S. Patent No. 5,274,322) in view of Robert Rosenberg's "Electric Motor Repair (third edition) Copyright 1988, Saunders College Publishing. The Office asserts that it would have been obvious to one having ordinary skill in the art at the time the invention was made

to combine Hauashi '322 vehicle generator with a stator having a first winding wound in full pitch pattern with at least one complete loops surrounding a first predetermined number of teeth of said stator and second winding wound in a short pitch pattern with at least one complete loop surrounding an adjacent second predetermined number of said teeth as was taught by Robert Rosenberg to advance an operating function while creating less torque ripple.

Applicant respectfully submits that not all of the limitations present in these claims are disclosed by either Hayashi et al., Robert Rosenberg, or by the combination thereof. Therefore, for at least the following reasons, Applicant respectfully traverses this rejection.

Independent claims 1, 6, and 11, as amended, each recite a stator of an AC generator having two separate multi-phase stator windings, the first of which being wound in a full pitch pattern with at least one complete loop surrounding a predetermined number of stator teeth, and the second of which being wound in a short pitch pattern with at least one complete loop surrounding a second predetermined number of stator teeth. The Office's position is that Robert Rosenberg discloses this two stator winding arrangement. Applicant respectfully disagrees.

First, Robert Rosenberg does not disclose a stator with two separate multi-phase windings, as is positively recited in the present invention. Rather, Robert Rosenberg discloses a single multi-phase, multi-layer, concentric stator winding. The disclosed winding consists of, for example, four layers where each layer has three groups, and wherein each group has either one or two coils per group. This is distinct from the present invention in that

the present invention is comprised of two separate multi-phase stator windings, not just one as is disclosed in the cited reference.

Second, because Robert Rosenberg fails to disclose a two stator winding arrangement, it likewise fails to disclose a two stator winding arrangement wherein one of the multi-phase windings is wound in a full pitch pattern with the second multi-phase winding being wound in a short pitch pattern. Robert Rosenberg does show the winding of the separate phases of a single stator winding in full and short pitch patterns. However, no mention is made of a two multi-phase stator winding arrangement wherein both patterns are used in combination so that one winding is wound in a full pitch pattern and the other winding is wound in a short pitch pattern.

Lastly, neither Hayashi et al. nor Robert Rosenberg disclose each stator winding making a complete loop around a predetermined number of teeth. The pattern in the present invention, as can be seen in FIGS. 3A and 3B, includes winding the respective windings in complete loops around a group of stator teeth. The cited references do not disclose such a pattern. For instance, the windings in Hayashi et al. are wave wound, which means that the winding passes through the slots and does not form a complete loop around a group of teeth (this wave wound pattern is shown in FIGS. 7 and 8 of Hayashi et al.). Similarly, Robert Rosenberg makes no reference to the complete loop winding pattern that is affirmatively claimed in the present invention.

Accordingly, for at least the reason that Hayashi et al. and Robert Rosenberg., either alone or in combination, fail disclose or describe a two multi-phase stator winding arrangement wherein a first multi-phase winding is wound in a full pitch pattern with at least one complete loop surrounding a predetermined number of stator teeth and a second multi-phase winding is wound in a short pitch pattern with at least one complete loop surrounding a second predetermined number of stator teeth, Applicant respectfully submits that the rejection of independent claims 1, 6, and 11 has been traversed, and therefore, respectfully requests that the rejection be reconsidered and withdrawn.

Because claims 2-5, 7-10, and 12, and 14-17 are dependent upon independent claims 1, 6, and 11 (believed to be allowable), respectively, Applicant respectfully submits that for at least the same reasons set forth above with regards to the independent claims, these

dependent claims are also allowable. Accordingly, Applicant respectfully requests that the rejection of these dependent claims also be withdrawn.

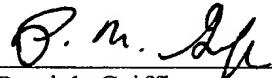
III. CONCLUSION

For the foregoing reasons, all presently pending claims are now believed to be in a condition for allowance. Early notice of the same is hereby respectfully requested.

Respectfully, submitted

Date: 7-21-03

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